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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/815,581	03/31/2004	Michael J. Antal JR.	UOHIP006D1	9383
22434	7590	08/09/2005	EXAMINER	
BEYER WEAVER & THOMAS LLP P.O. BOX 70250 OAKLAND, CA 94612-0250			NECKEL, ALEXA DOROSHENK	
			ART UNIT	PAPER NUMBER
			1764	

DATE MAILED: 08/09/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/815,581

Applicant(s)

ANTAL, MICHAEL J.

Examiner

Alexa D. Neckel

Art Unit

1764

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 5-12-05.
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) _____ is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 20-24 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 20-22 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Antal Jr. et al. ("High-Yield Biomass Charcoal" from Energy & Fuels 1996, Vol. 10, Number 3, pages 652-658) in view of Bergman (WO 98/51434).

With respect to claim 20, Antal Jr. et al. discloses a reactor (figure 2) which comprises a housing (pressure vessel) with a sealable opening (pressure-tight hinged closure) for receiving a removable canister with a lid; heaters which heat the distal end (2) of the canister (fig. 2) (page 653, col. 2, paragraph under "Apparatus and Experimental Procedures"); a first valved exit orifice (3) at a proximal end (1) and a second valved exit (4) orifice at a distal end (2) of the housing (pressure vessel); and a valved entry orifice (5) at the proximal end (1) (page 653, col. 2, paragraph under "Apparatus and Experimental Procedures").

Figure 2 of Antal Jr. et al. does not provide reference numbers, so the examiner has numbered various elements below to provide further clarification of how the reference has been applied.

Figure 2. Schematic of the laboratory reactor.

Antal Jr. et al. fails to disclose any insulation in the device.

Bergman also teaches a pressure vessel (1) with a removable carrier (5) and heating devices (13) placed within the vessel (1) and provides insulation (4) so that it surrounds at least a portion of the carrier (5) (figure 1) so that heat dissipation to the surrounding pressure vessel wall is low (p. 5, line 22 -p. 6, line 20). It would have been

Art Unit: 1764

obvious to one of ordinary skill in the art at the time the invention was made to provide insulation to the canister within the pressure vessel of Antal Jr. et al., as taught by Berman, in order to prevent dissipation of heat to the pressure vessel wall.

With respect to claim 21, Antal Jr. et al. further discloses wherein the heaters are resistance heaters (page 653, col. 2, paragraph under "Apparatus and Experimental Procedures").

With respect to claim 22, Antal Jr. et al. further discloses wherein a flare (burner) is in communication with the second valved exit (4) (see figure 2).

With respect to claim 24, the schematic illustration of Antal Jr. et al. has been applied so that the proximal end (1) is at the bottom and the distal end (2) is at the top of the vertically arranged device shown in figure 2. The device of Antal Jr. et al. arranged so that the proximal end (1), and its associated elements, is at the top while the distal end (2), and its associated elements, is at the bottom of the vessel would still be the same apparatus (only turned on end). It appears from the description of the operation of Antal Jr. et al.'s device, that in such an orientation, the device would continue to be operational. It has been held that there is no invention in shifting the location of parts when the operation of the device would not thereby be modified. In re Japikse, 86 USPQ 70 (CCPA 1950).

3. Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over Antal Jr. et al. ("High-Yield Biomass Charcoal" from Energy & Fuels 1996, Vol. 10, Number 3, pages 652-658) in view of Bergman (WO 98/51434) as applied to claim 20 above, and further in view of Kippelman (5,290,523).

The schematic of the apparatus of Antal Jr. et al (figure 2) only illustrates that the valved entry (5) passes into the proximal end (1) but fails to illustrate if it extends into the canister.

Koppelman discloses a method and apparatus for upgrading carbonaceous fuel which heats and pressurizes (col. 10, lines 24-40) bio-mass material to transform it into charcoal (col. 11, lines 17-19). Koppelman further teaches wherein preheating the inert gas feed results in reductions in overall operation time (col. 8, lines 52-60). It would have been obvious to one of ordinary skill in the art at the time the invention was made to extend the feed line of Antal Jr. et al. into the canister so that the heat of operation would preheat the nitrogen feed in order to achieve reductions in operation time as taught by Koppelman.

Response to Arguments

Specification

The objections to the abstract, title and disclosure are withdrawn due to applicant's amendments.

35 USC 112, Second Paragraph

The rejection of claims 20-24 under 35 USC 112, second paragraph are withdrawn due to applicant's amendments to the claims.

35 USC 103

Applicant argues that Antal is not designed to have an input of air and that "there is no way for Antal to introduce air at the proximal end of the canister through a valved air entry orifice".

The examiner respectfully disagrees. Firstly, the material worked upon (such as air) is not given patentable weight in an apparatus claim, MPEP 2115, and in this case amounts to a recitation of intended use of the claimed device. Therefore the limitation of the valve being used for air is not given weight in the claim. Since the apparatus of Antal does provide for a valved entry (5) into the proximal end of the canister, the apparatus of Antal continues to read on the claim as applied.

Applicant argues that Koppelman does not disclose how far a line should be extended into a reactor in order to achieve the preheating taught, but also states "only be extending line 5 substantially to the top of the reactor would the required downflow be achieved".

The examiner is slightly confused as to if applicant's position. While applicant states that Koppelman does not provide a teaching for the amount of line to be extended into the reactor, applicant also states that the only option when applying the general teaching of Koppelman to Antal would result in the line extending almost the entire length of the reactor.

In response to applicant's argument that the instant invention does not extend the line through the reactor for preheating, the fact that applicant has recognized another advantage which would flow naturally from following the suggestion of the prior art cannot be the basis for patentability when the differences would otherwise be obvious. See *Ex parte Obiaya*, 227 USPQ 58, 60 (Bd. Pat. App. & Inter. 1985).

Conclusion

4. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alexa D. Neckel whose telephone number is 571-272-1446. The examiner can normally be reached on Monday - Thursday from 9:00 AM - 7:30 PM.

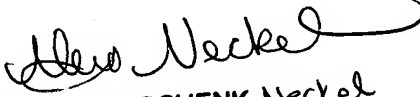
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Caldarola can be reached on 571-272-1444. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 1764

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Alexa D. Neckel
Examiner
Art Unit 1764

August 3, 2005


ALEXA DOROSHENK Neckel
PRIMARY EXAMINER